

its substance, and an ill-defined elevation, which soon disappears, is all that remains.

Lastly, the substance of the fibre becomes contracted and condensed. The diameter of a fibre towards, or at the close of intra-uterine life, is considerably less than at a much earlier period.

At the period of birth muscular fibres vary much in size.

The several stages in the development of muscular fibre, above mentioned, do not succeed each other as a simple consecutive series; on the contrary, two, or more, are generally progressing at the same time. Nor does each commence at the same period in all cases.

BOTANICAL SOCIETY OF EDINBURGH.

January 11th, 1855.—Professor Balfour, President, in the Chair.

A letter was read from Dr. Senoner, Vienna, in which he remarks:—“I beg your attention to the specimens of Auer’s new discovery of ‘natural self-printing,’ which must be of importance to the interests of botany, especially to the study of the Cryptogamics. As yet the discovery has been but little applied practically. Von Heufer has published the Cryptogamic Flora of the valleys of the Siebenburgen with illustrations of this kind. Von Ettingshausen has by this means given figures of the forms of the leaves in the Euphorbiaceæ; and there is now appearing at Trieste the Flora of Northern Italy, in drawings of this kind, of which no descriptive text has yet been published, but only the figures, with the addition of the names, the classification, and the different stations of the plants. The first fasciculus has appeared. The delineation is not so correct and clear as in Auer’s self-printing, but it may be expected to be extended and improved. In Tyrol also there is coming out by Ambross a Flora of the ‘Tirol Meridionale,’ which is scientifically written, and gives, in conjunction with Hausman’s published Flora of Tyrol, a distinct view of the Flora of that country, which still, however, conceals many treasures.”

Dr. Balfour read some observations by Mr. Quarles Harris on the Vine disease.

“The first attack,” says Mr. Harris, “I conceive to have been from without, and to have fallen upon the leaves and fruit, in the form of very minute and (to the naked eye) invisible sporules of a peculiar fungus, formerly either unknown to, or not noticed by botanists, perhaps because its blasting and destructive powers were never before called into action. The Vine is thus covered with these small cryptogamic germs, which are introduced into the cells and vessels, and carried to all parts of the plant.

“The following spring, on the rising of the sap, the disease shows itself in the new shoots and in the bloom heads, and every infected vine spreads ruin around it in every direction, the spores ripening rapidly, and scattering thousands of sporules, which, wafted by every breeze, settle on the neighbouring vines.

“After the most laborious experiments and investigations, in which I have had the assistance of intelligent practical botanists and che-

mists, I cannot refer the first attack to anything but atmospheric influences and disturbances, causing an unhealthy state of the vines, thus rendering them a fit prey to this fungus (the germs of which are floating in the air), and unable to resist its insidious attacks.

"It would require that I should write a volume rather than a letter, were I to attempt to give a complete history of my experiments. I see in my brother's present letter a confirmation of my own experience as to the new shoots and flower-buds absolutely bursting forth covered with filaments of the *Oidium*."

The following papers were read:—

1. "Notes on the Flora of Dumfries," by W. Lauder Lindsay, M.D.

The author's remarks applied to the district immediately around Dumfries, radiating to a varying distance of five to ten miles from the centre.

His object was not so much to mention the floral treasures of the county, as to call attention to the fact of the extreme luxuriance of the common vegetation, not having noticed in any other part of this country, or in any other countries, our common wild plants growing to such a height or in such profusion.

2. "Notice of Plants in the neighbourhood of Oban, and in part of the Island of Mull," by David Philip Maclagan, Esq. The author having resided at Oban during the months of August and September last, had spent part of his time in examining the botany of the neighbourhood, and now laid before the Society a notice of some of his excursions, and a list of all the plants observed, amounting to about 400 species.

3. "On Plants found in Strachur, Argyleshire, and in Roxburghshire," by W. Nichol, Esq.

4. "On Lichens collected on the Breadalbane Mountains and Woods," by Hugh Macmillan, Esq.

5. "On Harmonious Colouring in Plants," by Professor M'Cosh.

MISCELLANEOUS.

On the Movements and Reproduction of the Naviculæ.

By M. FOCKE.

THE author, like Ehrenberg, refers the *Diatomaceæ* to the animal kingdom. According to his account the movements of the *Naviculæ* are effected by means of a kind of temporary, exsertile and retractile, foot, which passes through openings discovered by the author on the sides of the carapace.

According to M. Focke, the reproduction of some species of *Naviculæ* presents a strange complication of the phænomena of "alternation of generations" and conjugation; *Navicula bifrons*, for example, forms by the spontaneous division of its internal substance, spherical bodies which like gemmules give rise to *Surirella microcora*. These by conjugation produce *N. splendida*, which gives rise to